Broadband Network Model on Tribal Lands
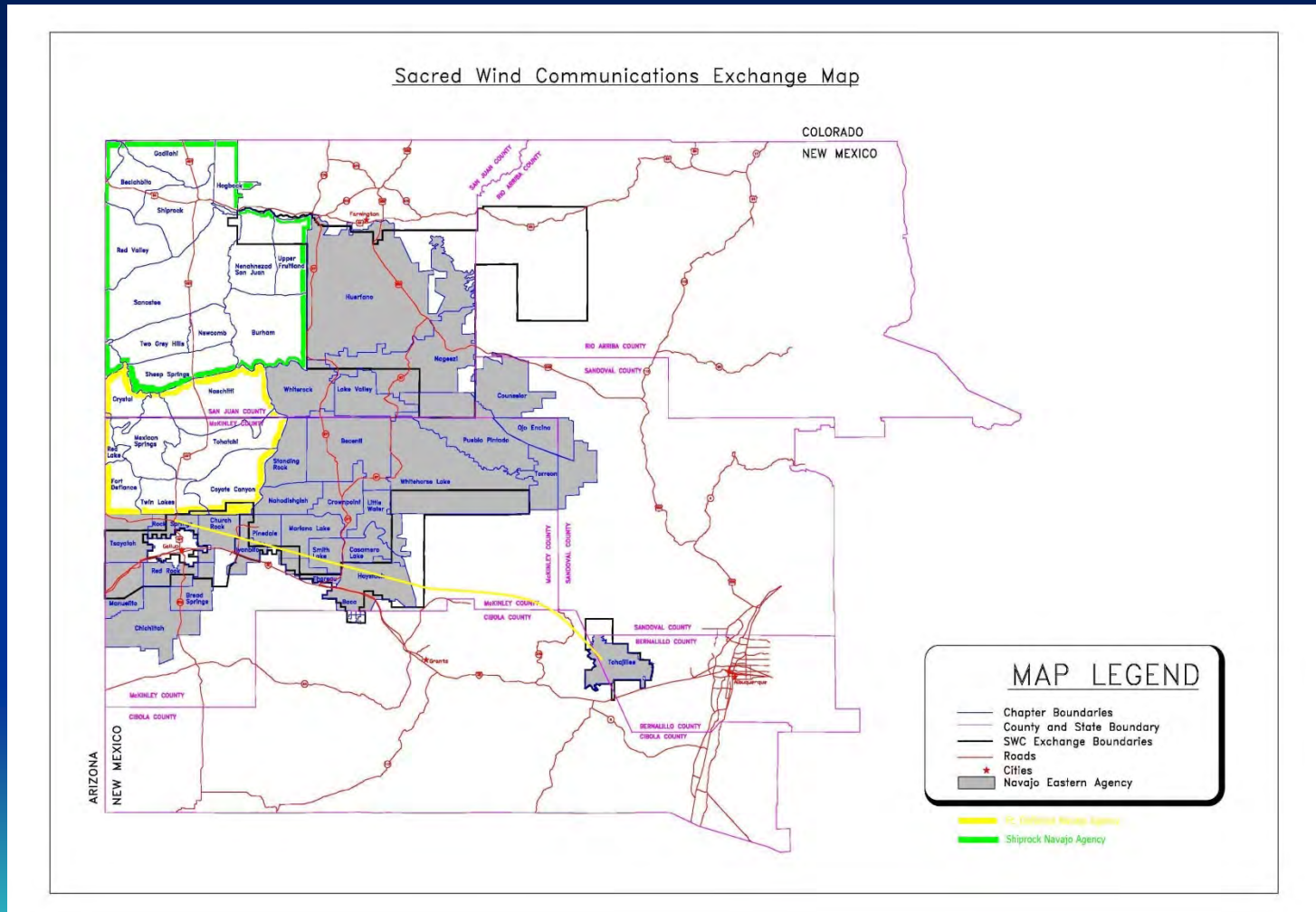
Sacred Wind Communications, Inc.

Sacred Wind's service territory

Sacred Wind Communications Exchange Map

Sacred Wind's service territory

- 3,600 sq miles
- No incorporated towns
- 8,000 homes
- 2/3rds remote
- 10% no electricity
- Right of Way impediments

Sacred Wind's customers

- 59.7% < poverty level
- 1,400 current Tribal Lifeline customers
- 70-90% TL eligible new customers

4

Network Buildout

- 2 Central Offices
- 15 towers
- 28 meet points
- 44 Bband Loop Carrier Cabinets
- 6 relay towers
- 27 miles fiber
- 750 miles copper

Older landline pedestals - *BEFORE*
(No Broadband)

SWC's Upgraded Network

SWC's Broadband cabinets - *AFTER*

100% Broadband Coverage

Building the Solution

- Most efficient for this terrain & distance
- Less encroachment (ROW)
  - IP/TDM switching
  - Fiber for capacity
  - Fixed Wireless to home or to copper
  - Fully IP based

8

Model for remote rural

- 2 independent exchanges
- "satellite" I&M offices
- Latest CO & FWLL technology
- "Localize" the mission

Tower Example
Huerfano Mesa (*Dził Na O Dithłii*)

Tower off the power grid
Blanco Canyon

Tower to relay point

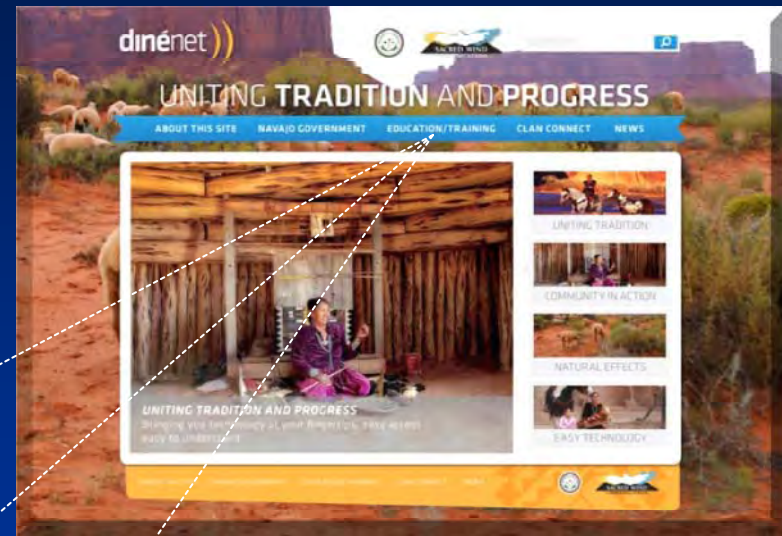# Fixed Wireless to the Home

Fiber to meet point for capacity

Serving the Unserved

- GPS every home
- Gain Line of Sight
- Avoid right of way impediments
- Reach 90% by 2013
- 100% broadband
- Where no electricity available:
  - Prioritize home-bound
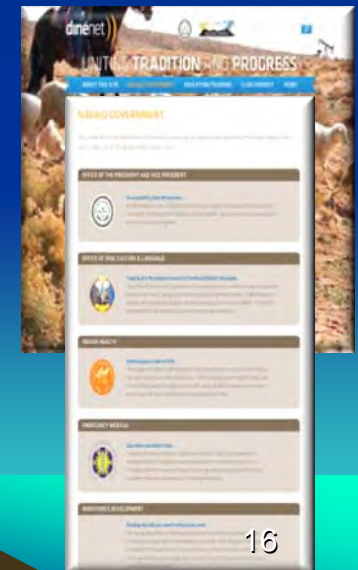
Making Broadband Culturally Relevant

Online Language

Tribal History

Gov't Services

Strong Broadband Demand
100% increase in 2010

ROW Roadblocks
11.6 mi. fiber optic pole attachment

- To provide broadband capacity for 500-700 homes

- 30-year old electric easement
- 3 year application process & still ongoing
- Required Arch & Enviro surveys to qualify for a categorical exclusion
- $170,000 in surveys
- $400,000 total costs to date
- Assessed $1.7 M ROW lease

ROW Roadblocks
RF Antenna needed on pole

- To "rehome" tribal customers to new network
- Tribal residential lease site
- 1-year process
- Required Enviro survey to inventory Milkweed (on a dump!)
- No categorical exclusion accepted